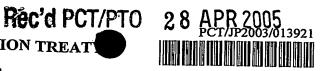
Translation

PATENT COOPERATION TREAT



PCT

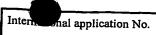
INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

A 11 12						
Applicant's or agent's file reference C1-A0229Y1P	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)					
International application No. PCT/JP2003/013921	International filing date (day/mont	and the transfer of the transf				
	30 October 2003 (30.10.2	30 October 2002 (30.10.2002)				
International Patent Classification (IPC) or na C12N 15/12, 1/15, 1/19, 1/21, 5/0 A61P 37/08	utional classification and IPC 10, C07K 14/705, 16/28, C12P 2	21/02, G01N 33/15, 33/50, A61K 39/395,				
Applicant	JGAI SEIYAKU KABUSHII	ZIVAIGITA				
	——————————————————————————————————————	CI KAISHA				
This international preliminary examinand is transmitted to the applicant account.	nation report has been prepared by to cording to Article 36.	his International Preliminary Examining Authority				
2. This REPORT consists of a total of	2. This REPORT consists of a total of6 sheets, including this cover sheet.					
and the die basis for	ed by ANNEXES, i.e., sheets of the this report and/or sheets containing Administrative Instructions under the	description, claims and/or drawings which have been rectifications made before this Authority (see Rule e PCT).				
These annexes consist of a total of sheets.						
3. This report contains indications relating to the following items:						
I Basis of the report						
II Priority						
III Non-establishment of	III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability					
IV Lack of unity of inven						
V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;						
VI Certain documents cited						
VII Certain defects in the international application						
VIII Certain observations on the international application						
Date of submission of the demand	Date of comp	pletion of this report				
30 October 2003 (30.10.2)		21 May 2004 (21.05.2004)				
Name and mailing address of the IPEA/JP	Authorized o	fficer				
Pacsimile No.	Telephone No	o.				

Form PCT/IPEA/409 (cover sheet) (July 1998)

INTERNATIONAL PREDMINARY EXAMINATION REPORT



PCT/JP2003/013921

I. Basis of the report	
1. With regard to the elements of the international application:*	
the international application as originally filed	
the description:	
nages	•
pages	, as originally file
pages	filed with the letter of
the claims:	, and want the letter of
no god	
Pogos	, as originally filed
	, as amended (together with any statement under Article 1
pages	, filed with the deman
the drawings:	, filed with the letter of
namer	
nages	, as originally file
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the general I' i'	, filed with the letter of
the sequence listing part of the description:	
pagespages	, as originally filed
	filed with the domand
	, filed with the letter of
the language of a translation furnished for the purposes of the language of publication of the international application.	of international search (under Rule 23.1(b))
	ence disclosed in the international application, the international quence listing:
furnished subsequently to this Authority in computer read	dable form.
The statement that the subsequently furnished writte international application as filed has been furnished.	en sequence listing does not go beyond the disclosure in the
been furnished.	ter readable form is identical to the written sequence listing has
The amendments have resulted in the cancellation of:	
the description, pages	
the claims, Nos.	
the drawings, sheets/fig	
	dments had not been made, since they have been considered to go ental Box (Rule 70.2(c)).**
Replacement sheets which have been furnished to the receiving (in this report as "originally filed" and are not annexed to a and 70.17).	Office in response to an invitation under Article 14 are referred to this report since they do not contain amendments (Rule 70.16
Any replacement sheet containing such amendments must be refer	rred to under item 1 and annexed to this report.
m PCT/IPFA/400 (Pour I) (Tulu 1000)	

IV Took of mitty of	2 0 2/02 03/13/21
IV. Lack of unity of invention	
1. In response to the invitation to restrict or pay additional fees the applicant has:	
restricted the claims.	
paid additional fees.	
paid additional fees under protest.	
neither restricted nor paid additional fees.	
2. This Authority found that the requirement of unity of invention is not complied wit not to invite the applicant to restrict or pay additional fees.	h and chose, according to Rule 68.1,
 This Authority considers that the requirement of unity of invention in accordance with Ru complied with. 	iles 13.1, 13.2 and 13.3 is
not complied with for the following reasons:	
A matter common to the subject matters of claims 1-11 is considered to base sequence represented by SEQ ID NO: 1 or 3 of the present application a membrane protein that has one immunoglobulin domain as an extracellular distribution intracellular signal transfer, and (2) matters relating to it.	and encoding a mouse-derived omain and has a motif for
DNA substantially identical with the DNA consisting of the base sequence represent application and encoding a mouse-derived membrane protein that has an extracellular domain and has a motif for intracellular signal transfer. So, the matter was considered to be not novel.	epresented by SEQ ID NO: 3 of the sone immunoglobulin domain as the above-mentioned common
That is, since the said common matter belongs to the prior art, it is not sense of the second sentence of PCT Rule 13.2.	
Therefore, there is no matter common to all the claims. Since there does natter considered to be a special technical feature in the sense of the second sechnical relationship in the sense of PCT Rule 13 can be found among the di So, it is evident that claims 1-11 do not satisfy the requirement of unity Therefore, the claims describe the following two inventions.	sentence of PCT Rule 13.2, no fferent inventions.
pplication, among the subject matters of claims 1.11	d by SEQ ID NO: 1 of the present
2) A portion concerning the DNA consisting of the base sequence represente pplication, among the subject matters of claims 1-11	
The scope that the International Preliminary Examining Authority think nity of invention is as follows.	
The portion concerning the DNA consisting of the base sequence represent application, among the subject matters of claims 1-11	sented by SEQ ID NO: 1 of the
elates to a major invention is as follows	
The portion concerning the DNA consisting of the base sequence represent application, among the subject matters of claims 1-11	ented by SEQ ID NO: 1 of the
. Consequently, the following parts of the international application were the subject of internation establishing this report:	ational preliminary examination
all parts.	
the parts relating to claims Nos.	

 V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement 				
1. Statement			-	
Novelty (N)	Claims	9-11	YES	
	Claims	1-8	NO	
Inventive step (IS)	Claims	11	YES	
	Claims	1-10	NO	
Industrial applicability (IA)	Claims	1-11	YES	
	Claims		NO	

2. Citations and explanations

Document 1: Biochem. Biophys. Res. Commun., 2001, 287 (1), pages 35-41

Document 2: Nucleic Acids Res., 2001, 29 (24), pages 4983-4993

Document 3: J. Exp. Med., 2000, 192 (7), pages 1059-1068

Document 4: Eur. J. Immunol., 2000, 30 (8), pages 2147-2156

Document 5: Immunol. Today, 2000, 21 (12), pages 611-614

Document 6 (Additional): J. Immunol., 1997, 159 (5), pages 2075-2077

The subject matters of claims 1-8 do not appear to be novel in view of document 1 cited in the ISR. Document 1 describes (1) substantially the same DNA as the DNA consisting of the base sequence represented by SEQ ID NO: 3 of the present application, (2) an estimated amino acid sequence of protein DIgR1 encoded by the said DNA, (3) a vector having the said DNA inserted, (4) a host cell holding the said vector, (5) a method for producing the said DIgR1 by culturing the said host cell, and (6) an antibody against the said DIgR1.

The subject matter of claim 9 does not appear to involve an inventive step in view of document 1.

Screening the compounds capable of being bound to a certain protein was a well-known technique when the present application was filed.

The subject matter of claim 1 does not appear to be novel in view of document 2 cited in the ISR. Document 2 describes a DNA about 60% homologous to the DNA consisting of the base sequence represented by SEQ ID NO: 1 of the present application (especially see GenBank Accession No. BG803833). The subject matter of claim 1 of the present application is a DNA capable of hybridizing with the DNA consisting of the base sequence represented by SEQ ID NO: 1 under a stringent condition, and the specification of the present application describes, "As a hybridization condition, for example, a less stringent condition can be enumerated" (page 8). Considering these, the DNA described in document 2 corresponds to the DNA of claim 1 of the present application.

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Matters covered by the statement:

The "compounds" described in claim 11 are specified in such a manner that they "are obtained by the method described in claim 9 or 10," and include all the compounds obtained by the method (screening method) described in claim 9 or 10.

However, the specification does not describe any particular compound obtained by the said screening method. So, the subject matter of claim 11 is not supported by the specification and is not disclosed in the specification. Furthermore, even considering the common general technical knowledge prevailing on the filing date of the present application, it is quite unknown what compounds are included and what compounds are not included. So, the description of claim 11 is very unclear.

Therefore, among the subject matter described in claim 11, no significant statement can be presented concerning the portion relating to the compounds obtained by the method described in claim 9 or 10.

So, among the subject matter described in claim 11, the statement is made only on the portion relating to the antibody described in claim 7.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V.2

The subject matters of claims 3-9 do not appear to involve an inventive step in view of document 2 cited in the ISR.

It was a well-known technique when the present application was filed that (1) a vector containing a DNA encoding a certain protein is used to transform a host cell, (2) the said host cell is cultured to produce the said protein, (3) an antibody against a certain protein is produced, and (4) the compounds capable of being bound to a certain proteins are screened.

The subject matter of claim 10 does not appear to involve an inventive step in view of documents 1 and 3-5 cited in the ISR.

Document 1 describes that DIgR1 is a noninhibitory molecule not having ITIM in an intracellular domain.

Documents 3-5 respectively describe that a noninhibitory/activatory molecule not having ITIM in an intracellular domain is bound to DAP12, DAP10 or FcRγ.

Furthermore, with regard to the two proteins having the affinity of being bound to each other, it was a well-known technique to screen the compounds capable of inhibiting the said binding, when the present application was filed.

So, a person skilled in the art could have easily conceived of (1) examining the affinity of DIgR1 described in document 1 of being bound to DAP12, DAP10 or FcR γ , and (2) screening the compounds capable of inhibiting the said binding with regard to the combinations of substances having the affinity of being bound to each other.

The subject matters of claims 1-9 do not appear to involve an inventive step in view of document 1 and newly cited document 6.

Document 6 describes that an inhibitory cell surface receptor belonging to the ITIM-bearing receptor family, and the noninhibitory/activatory counterpart of the said receptor not having ITIM in an intracellular domain, are highly homologous to each other in an extracellular domain.

So, a person skilled in the art could have easily conceived of (1) screening a mouse-derived cDNA library using the gene encoding the extracellular domain of DIgR1 described in document 1 as a probe, to obtain a DNA having ITIM in an intracellular domain and encoding the counterpart of DIgR1, (2) using a vector counterpart.

Furthermore, when the present application was filed, producing an antibody against a certain protein, and screening the compounds capable of being bound to a certain protein were well-known techniques.

The subject matter of claim 10 does not appear to involve an inventive step in view of documents 1 and 4-6.

Documents 4-6 describe that an inhibitory molecule having ITIM in an intracellular domain is bound to SHP-1, SHP-2 or SHIP.

So, a person skilled in the art could have easily conceived of (1) screening a mouse-derived cDNA library using the gene encoding the extracellular domain of DIgR1 described in document 1 as a probe, to obtain a DNA having ITIM in an intracellular domain and encoding the counterpart of DIgR1, (2) using a vector containing the said DNA for transforming a host cell, (3) examining the binding affinity between the protein obtained by culturing the said host cell and SHP-1, SHP-2 or SHIP, and (4) screening the compounds capable of inhibiting the said binding with regard to the combinations of substances having the affinity of being bound to each other.

The subject matter of claim 11 appears to involve an inventive step in view of documents 1-6.

Documents 1-6 do not describe that an antibody against the protein of the invention of the present application can be used as an anti-allergic drug. A person skilled in the art could not have easily conceived of the constitution from the descriptions of documents 1-6.